

FAST TURN-OFF SLOW TURN-ON ARBITRATOR FOR
REDUCING TRI-STATE DRIVER POWER
DISSIPATION ON A SHARED BUS

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ABSTRACT OF THE DISCLOSURE

A bus arbitrator for use in a shared bus system in which N bus devices request access to a shared bus. The bus arbitrator slowly activates and rapidly de-activates tristate line drivers coupled to the shared bus. The bus arbitrator comprises: 1) an input interface for receiving a first bus access request signal from a first bus device; 2) a delay circuit that receives the first bus access request signal from the input interface and generates a time-delayed first bus access request signal; and 3) a comparator circuit that receives the first bus access request signal from the input interface and the time-delayed first bus access request signal from the delay circuit and generates a line driver enable signal only if both of the first bus access request signal and the time-delayed first bus access request signal are enabled. The comparator circuit disables the line driver enable signal if either of the first bus access request signal or the time-delayed first bus access request signal is disabled.